

a) generating a mapped netlist through a synthesis process,
performing a rough placement process including the steps of:

b) executing a cell separation process according to the netlist, wherein
cells are placed at locations;

c) changing the netlist;

d) modifying spacings of the cells responsive to changes made to the
netlist, wherein a placement of the cells are changed according to the changes
made to the netlist;

e) partitioning the cells into a plurality of partitions;

f) creating a new partition;

g) changing locations of partitions;

[f] h) changing the placement of the cells after a partition is [created]

added

or changed;

[g] i) determining whether the placement has converged, wherein steps c-

[f] h are repeated if convergence is not yet achieved and steps b-g are performed

as part of a rough placement process such that physical placement of an
integrated circuit is adaptive to changes made to the netlist during the rough placement
process until convergence is achieved;

i) performing a detailed placement and routing process.

10. (Three Times Amended) A computer system including a processor
coupled to a bus and a memory coupled to the bus, comprising:

a rough placement logic for placing cells of an integrated circuit design
represented as a netlist having cells and connections between the cells;

a cell separator for assigning initial locations to each of the cells of the netlist;

a synthesis tool for changing the netlist in response to cell location information, wherein an area in which cells are allowed to be placed within is scaled in response to changes made to the netlist;

a partitioner for partitioning the cells into a plurality of separate partitions, wherein cells are placed at different locations when a new partition is created or when a partition is moved;

a spacer for changing the partitions, wherein changes to the partitions result in corresponding changes to locations of where the cells are placed;

a comparator for determining convergence is achieved, wherein a physical placement of an integrated circuit is adaptive to changes made to the netlist during the rough placement process until convergence is achieved;

→ performing a detailed placement and routing process after convergence is achieved during the rough placement process.

18. (Once Amended) A computer-readable medium having stored thereon instructions for causing a computer to implement a placement process comprising the steps of:

- a) generating a netlist through a synthesis process;
- b) executing a cell separation process according to the netlist, wherein cells are placed at locations;
- c) changing the netlist;
- d) modifying spacings of the cells responsive to changes made to the netlist, wherein a placement of the cells are changed according to the changes made to the netlist;
- e) partitioning the cells into a plurality of partitions;
- f) changing the placement of the cells after a partition is created or changed;

g) determining whether the placement has converged, wherein steps c-f are repeated if convergence is not yet achieved and steps b-g are performed as part of a rough placement process, such that physical placement of an integrated circuit is adaptive to changes made to the netlist during the rough placement process until convergence is achieved;

h) performing a detailed placement and routing process.